MASTER MARKSMANSHIP TRAINING COURSE

U.S. ARMY

MMTC

Range Estimation

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Nature of the Terrain

- **Upward sloping terrain distance appears shorter**

- **Downward sloping terrain distance appears further**

- **Dead space makes target appear closer**

- **Smooth and flat terrain makes target appear farther**

Nature of the Light

• **Bright and clear, the target appears closer**

• **Dull and dark, the target appears farther**

• **Sun behind viewer, the target appears closer**

• **Sun behind target, the target appears farther**

Nature of the Target

- The larger the target the closer it will appear

- The smaller the target the farther it will seem

- A target that contrasts with its background will appear closer

- A target that has an irregular outline will appear farther

Ranging the Target

- **Football Field Method**

- **Appearance of Objects Method**

- **Visible Detail Method**

- **Bracketing**

- **Mil Relation Formula / Reticle Measurements**

- **Map Method**

Football Field Method

- Estimate 100 yards, then determine how many of these units will fit between you and the target

- This method's accuracy is limited to the ground visibility

- Accurate to about 800 yards

Appearance of Objects

➢ **This method requires the viewer to be familiar with the sizes and details of personnel and equipment at certain distances**

➢ **Limited by visibility and familiarity of target**

Visible Detail Method

➢**Observing the amount of detail on the target at various ranges indicates the distance**

➢**A human target at:**

100 yds- facial features are identifiable

200 yds- loss of facial detail, but skin and equipment color identifiable.

300 yds- clear body outline, face color visible, but other details blurry.

400 yds- body outline is clear but remaining details blurred.

500 yds- body shape tapers at ends and the head melds with the shoulders.

600 yds- body appears wedge-shaped without appearance of head.

Bracketing

➤ **The viewer estimates the shortest possible distance, then the farthest possible distance**

➤ **The average of those distances is the estimated range to the target**
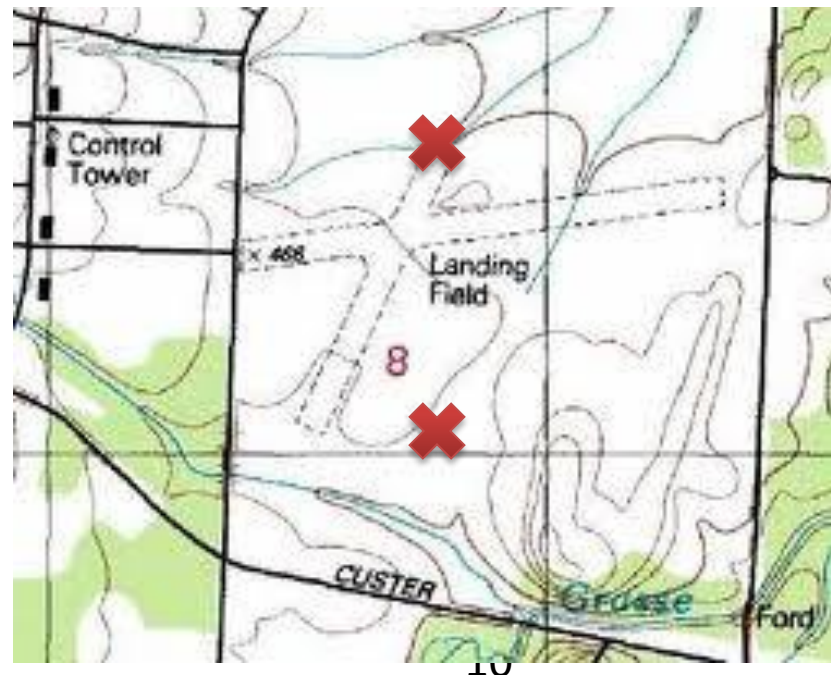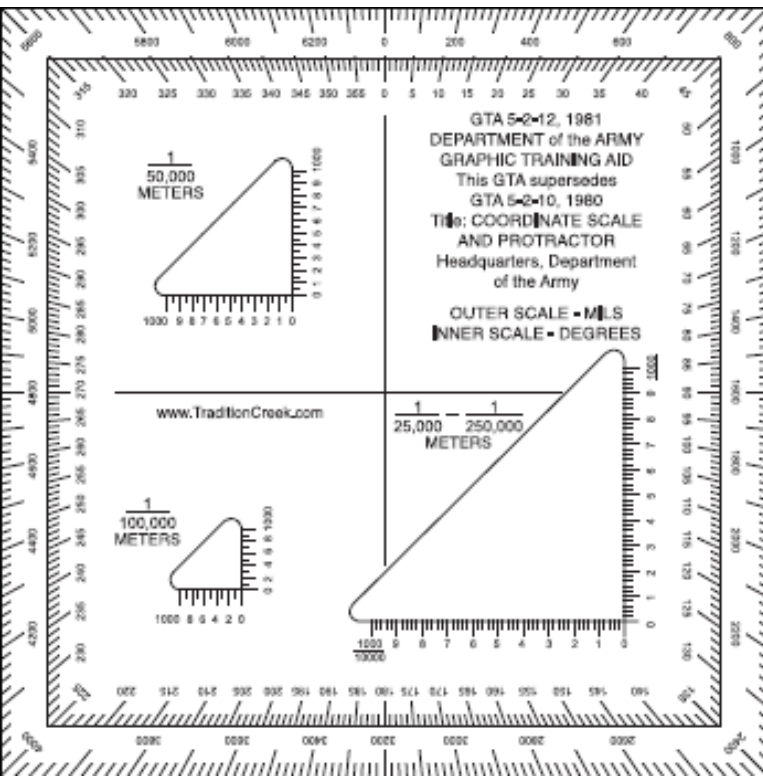
100 yards   **200 yards**   **300 yards**

Map Method

1. **Plot your location on map**
2. **Plot the location of the target**
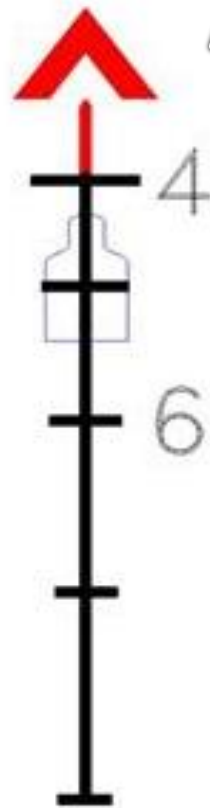3. **Measure distance between the two points**

10

Ranging the Target
ACOG

500M

600M

ACOG BULLET
DROP COMPENSATOR (BDC) & RANGING CAPABILITY

100m

200m

300m

4

400-800m

6

Point of Impacts

Using BDC

4

6

500m Target

4

6

600m Target
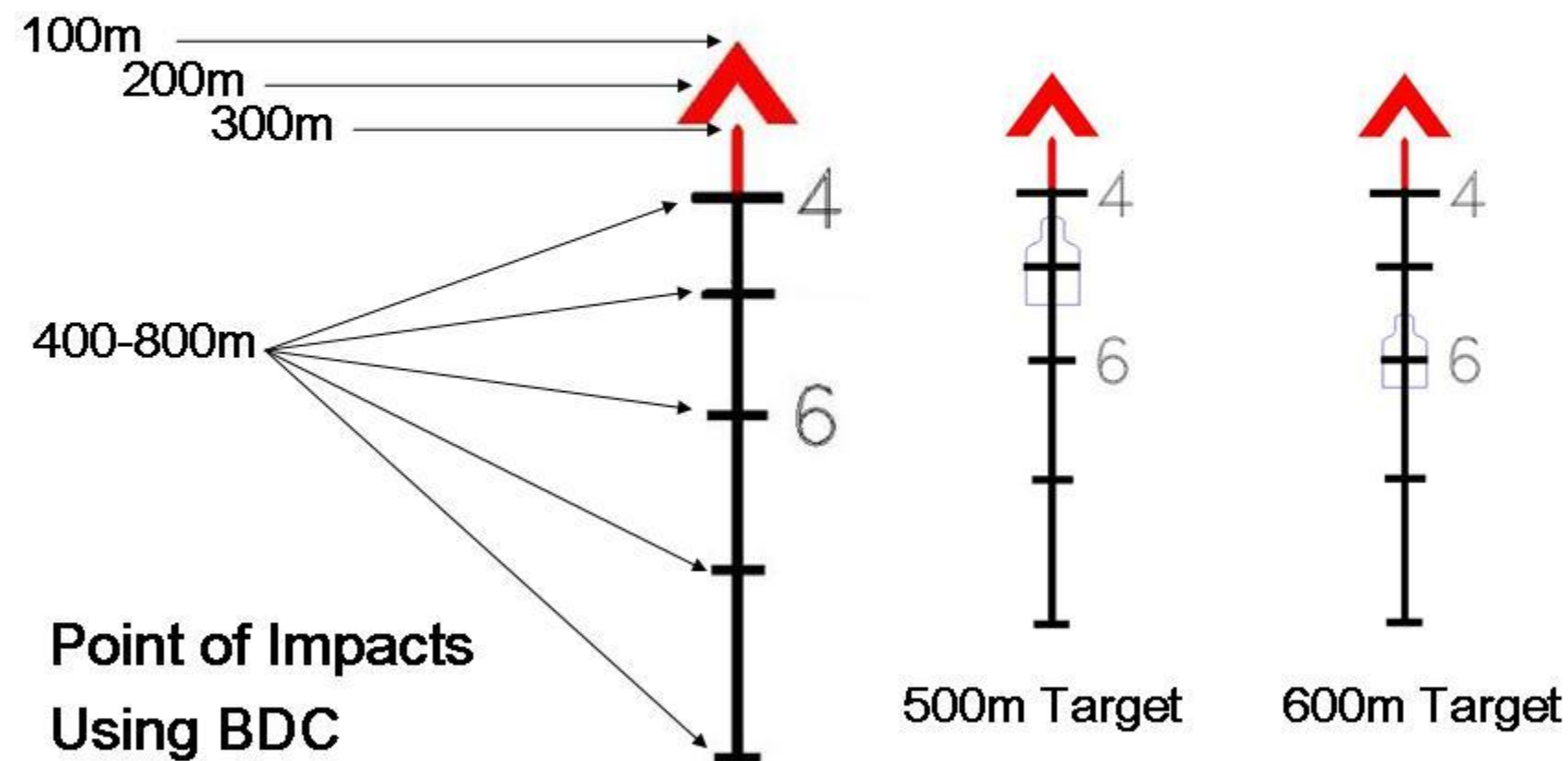
Ranging the Target
ECLAN

500M

900M
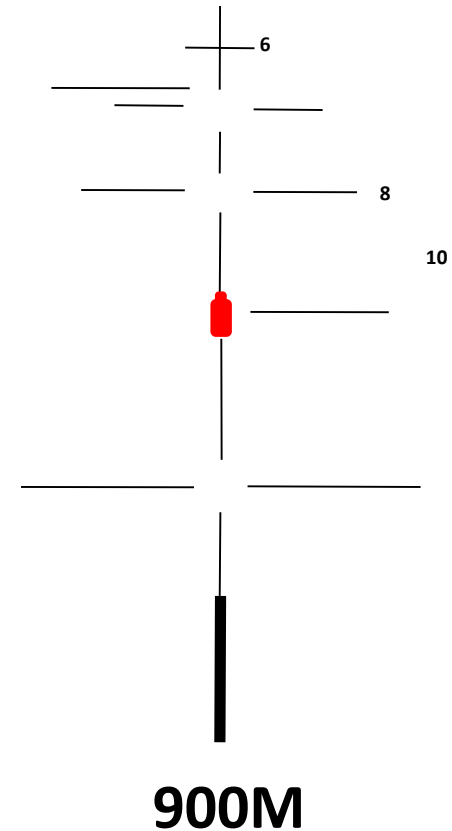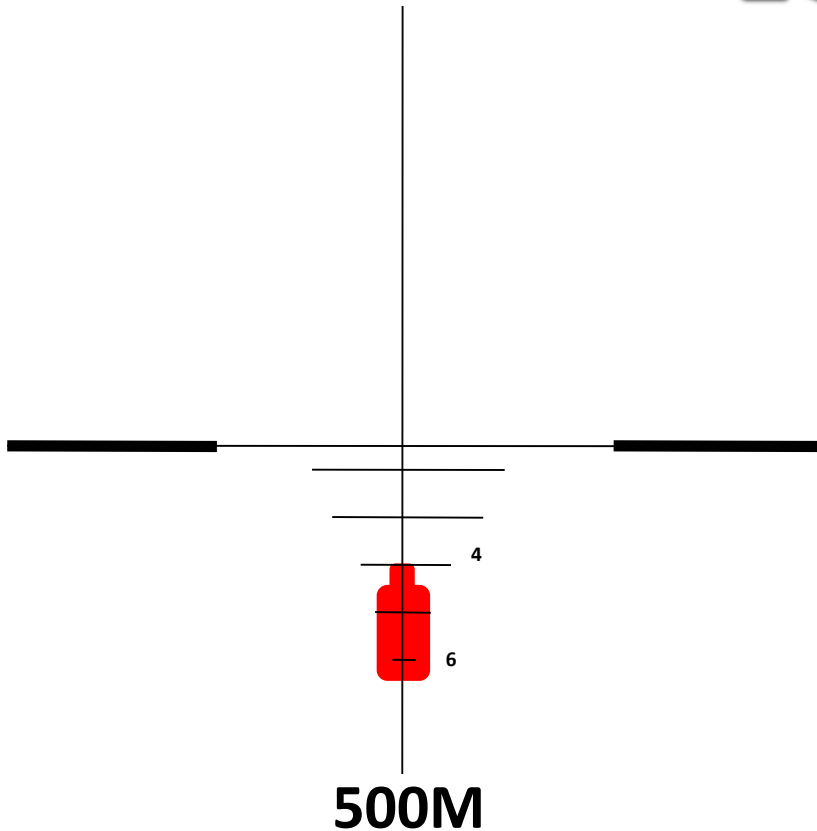
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Questions?